

ARGUMENTS/REMARKS

Applicants would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe and claim the subject matter which applicants regard as the invention.

Claims 1-3 and 5-30 remain in this application. Claim 4 has been canceled.

The Examiner objected to the IDS filed on January 26, 2004, for having missing pages. A new IDS containing the missing pages is provided.

The Examiner objected to claims 14, 27, and 30 for having a misspelled word. The claims have been amended to correct this error, making the objections moot.

Applicant notes that the Examiner has effectively issued a new grounds of rejection for claim 4 by rejecting amended claim 1. In the previous amendment, claim 1 had been amended to include the limitations of claim 4, which had been rejected as being unpatentable over *Lindemann et al.* in view of applicant provided references. In that rejection, the Examiner admitted that Lindemann does not disclose characterization of signal components employing a primitive grouping technique. However, the Examiner rejected the amended claim 1 under new grounds, as being anticipated by Lindemann, and thus the Examiner is now arguing that Lindemann *does* teach primitive grouping techniques. Accordingly, the Examiner has effectively rejected the previous claim 4 under new grounds by the claim 1 rejection in the current Office action. Note that amending claim 1 to incorporate the limitations of claim 4 is not a substantive amendment (because a dependent claim incorporate all of the limitations of a parent claim), and thus cannot necessitate the new grounds of rejection. Accordingly, the rejection should NOT have been made final, and thus the finality of the rejection should be withdrawn.

Claims 1-3, 5-10, 12/10, 13-21, 23/21, and 24-30 were rejected under 35 U.S.C. §102(b) as being anticipated by *Lindemann et al.* (U.S. 5,651,071). Claims 1, 11, 12/11, 15, 22, and 23/22 were rejected under 35 U.S.C. §102(b) as being anticipated by *Strong et al.* (U.S. 4,051,331). For the following reasons, the

rejections are respectfully traversed. For the following reasons, the rejections are respectfully traversed.

Claim 1 recites a method have a step of " the characterization, in a signal analysis phase, of signal components of the spurious signal components and of an information signal contained in the input signal". Claim 15 recites similar limitations at lines 4-7. Claim 28 recites a method including a similar at lines 4-7.

Lindemann does not suggest any such characterization step. The Examiner points to col. 2, lines 37-53 as teaching a step of characterization in a signal analysis phase. However, a close reading of that section does not support the Examiner's interpretation.

Instead, the cited section merely discusses analyzing left and right digital audio signals to produce left and right signal frequency vectors to produce a noise reduced left and right signal vector. There is no suggestion of characterizing signal components of any spurious signals. Note that the term "characterization" is defined as "the act of characterizing" and the term "characterizing" is defined as "to describe the character or quality of" and "to be a characteristic of; distinguish" (see <www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=characterizing>).

The reference does not suggest any step that effectively "describes the character or quality of" any components of the spurious signals. Instead, the reference appears to treat a noise signal as a single entity, and does not look at its signal components (see, e.g., col. 4, line 61 to col. 5 line 36). There is no suggestion of characterizing the spurious signal components using auditory-based features. The Examiner's statement that Lindemann teaches grouping based on "directionality", "short-term amplitude variation (sic)", and "pitch", even if true, is directed at the entire noise signal, not components thereof.

Furthermore, the reference does not even suggest that the "directionality", "short-term amplitude deviation", and "pitch" criteria are used for any grouping of signals. Instead, the reference merely states that these criteria are used as "cues" used for digital encoding techniques. Thus, the reference does not even teach that for which it was cited.

Thus, the Lindemann reference cannot anticipate claims 1, 15, or 28, and thus those claims are patentable over the reference.

In addition, Strong fails to teach the cited step. The Examiner cites col. 4, line 35 to col. 5, line 30 as teaching a characterization step as recited in the claims. However, the cited section discusses only the speech signal. There is no discussion of any spurious signals. Accordingly, the reference cannot teach "characterization, in a signal analysis phase, of signal components of the spurious signal components" because there is no discussion at all of spurious signals or their components.

Hence, claims 1, 15, and 28 are patentable over the Strong reference as well.

Furthermore, claim 1, as amended, recites that:

 said characterization of the signal components are performed under utilization at least of auditory-based features determined in the signal analysis phase, employing a primitive-grouping method including the step of breaking down said signal into a plurality of analyses related to particular frequency regions of an acoustic spectrum of said signal at particular moments in time.

Neither Lindemann nor Strong suggest any such primitive-grouping method as defined by the amended claim language. Accordingly, claim 1 is patentable over the references.

In addition, claim 15 recites that

 said characterization of the signal components is performed under utilization of at least auditory-based features determined in the signal analysis phase by employing a scheme-based grouping technique including the step of regrouping a primitive grouping according to one or more classes of sound sources.

Again, neither Lindemann nor Strong suggest any such primitive-grouping method as defined by the amended claim language. Accordingly, claim 15 is patentable over the reference for this reason as well.

Still further, claim 28 recites that:

 said characterization of the signal components is performed under utilization of at least auditory-based features determined in [a] signal analysis phase to separate speech signals from non-speech signals in the

signal processing phase.

Yet again, neither Lindemann nor Strong suggest any such primitive-grouping method as defined by the amended claim language. Accordingly, claim 28 is patentable over the reference for this reason as well.

The remaining claims, each of which depends on one or more of claims 1, 15, and 28, are each patentable over either reference for at least the same reasons as the parent claim.

In consideration of the foregoing analysis, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 33497.

Respectfully submitted,

PEARNE & GORDON, LLP

By:


Robert F. Bodi, Reg. No. 48,540

1801 East 9th Street, Suite 1200
Cleveland, Ohio 44114-3108
(216) 579-1700

November 23, 2004